Undergraduate Catalog of Courses

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3+2 Engineering

Saint Mary's College of California

3+2 ENGINEERING PROGRAM

Through the 3 + 2 Engineering Program, Saint Mary's offers students the benefits of a liberal arts education while allowing them to pursue an engineering degree. Students spend their first three years at Saint Mary's taking physical science, mathematics, humanities and social science courses. The final two years are completed at an engineering school approved by the program's director. Upon completion of all academic requirements, students are granted two degrees: a bachelor of arts from Saint Mary's College and a bachelor of science in engineering from the university they have chosen for completing the final two years of the program. The full range of engineering specializations can be studied: Computer Science, Electrical Engineering, Biomedical Engineering, Aeronautical Engineering, Chemical Engineering, and Mechanical Engineering. Saint Mary's has a transfer agreement with Washington University in St. Louis which guarantees admission to our students who have a grade point average of at least 3.25.

FACULTY

Jessica Kintner, PhD, *Director; Professor of Physics and Astronomy*

LEARNING OUTCOMES

After completing the Engineering Program at Saint Mary's, students will have a working knowledge of the physical world and mathematics, and a developed ability to reason and communicate. These gains will allow the students to succeed in the specialized engineering courses taken after transferring and to work effectively as an engineer upon graduation.

REQUIREMENTS

Students must satisfy the following requirements:
The completion of 27 transferable course credits with a minimum of 18 completed at Saint Mary's. The core curriculum requirements are modified to fit in three years rather than four. Students are not required to take: **Seminar 104**, a fourth Jan Term, a second TRS course, a fourth engaging the world area, or a language. All other core curriculum requirements remain in place.

Habits of Mind:
Collegiate Seminar Courses: 3 courses including **Seminar 001, 002,** and **103**
Writing Courses: 3 courses including **English 4, 5,** and **Physics 181**

Pathways to Knowledge:
Mathematical Understanding: 1 course
Theological Understanding: 1 course, Christian Foundations
Social, Historical, and Cultural Understanding: 2 courses
Artistic Understanding: 2 courses designated as meeting the Artistic Analysis learning outcomes and at least .25 credits in a course designated as meeting the Creative Practice learning outcome.

Engaging the World:
3 courses that span three of the following four areas: Common Good, American Diversity, Global Perspectives, and Community Engagement

Completion of the following courses:
Mathematics 27, 38, 39, 134
Physics 1, 2 (lab), 3, 4 (lab), 60, 60L (lab), 102, 105, 181 (WID)
Chemistry 8, 9 (lab)
Four upper division Physics electives*

*__Math 120__ may be substituted for an upper division Physics elective

OR

For future CS Engineers:
Completion of the following courses:
Mathematics 27, 38, 39, 134
Physics 1, 2 (lab), 3, 4 (lab), 60, 60L (lab), 102, 181 (WID)
CS 21, 174
Three upper division CS or Physics electives*

*__Math 120__ may be substituted for an upper division Physics elective

Other courses may be required or recommended for a particular branch of engineering. The student must consult with the 3 + 2 Engineering Program director regarding his/her course of study.